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# PREMIUMS

OFFERED BY THE

# S O C I E T Y

FOR THE ENCOURAGEMENT OF

ARTS, MANUFCATURES

AND

COMMERCE,

IN THE

YEAR MDCC LXXXIV.

s 4

TO THE

### PUBLICK.

ADELPHI BUILDINGS, April 10, 1784.

THE chief objects of the attention of the Society for the Encouragement of Arts, Manufactures, and Commerce, in the application of their Rewards, are Ingenuity in the feveral branches of the Polite and Liberal Arts; useful discoveries and improvements in AGRICULTURE, MANUFAC-TURES, MECHANICKS, and CHEMISTRY, or the laying open any fuch to the Publick; and, in general, all fuch useful inventions, discoveries, or improvements, (though not mentioned in the Book of Premiums,) as may appear to have a tendency to the advantage of Trade and Commerce; the Society therefore, in pursuance of their plan, propose to bestow the following premiums.

Premiums

### Premiums for Planting and Husbandry.

- 1. ACORNS. For fetting or fowing the greatest quantity of land, not less than ten acres, with acorns, between the first day of October, 1783, and the first of January, 1784; and for fencing and preserving the same effectually, in order to raise timber; the gold medal.
- 2. For the fecond greatest quantity of land, not less than five acres, set or sown with acorns, agreeably to the above conditions; the filver medal.

CERTIFICATES of the setting or sowing agreeably to the above conditions; and that there are not sewer than one thousand plants on each acre, to be produced to the Society, on or before the first Tuesday in November, 1784.

3. RAISING OAKS. To the person who shall raise the greatest number of oaks, not sewer than sive thousand, either from young

8. For

young plants, or from acorns, in woods, parks, or forests, that have long been under timber, and effectually fence and preserve the same, in order to secure a succession of oak timber in this kingdom; the gold medal.

4. For the next greatest quantity, not fewer than three thousand; the silver medal.

CERTIFICATES and accounts to be produced on or before the first Tuesday in January, 1788.

5, 6. The fame premiums are extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in January, 1789.

7. CHESNUTS. For fetting or fowing the greatest quantity of land, not less than six acres, with Spanish Chesnuts, before the first day of May, 1784, and for effectually fencing and preserving the same, in order to raise timber; the gold medal.

- 8. For the fecond greatest quantity, not less than four acres; the silver medal.
- 9. For the third greatest quantity, not less than two acres; the silver medal.

CERTIFICATES of fetting or fowing agreeably to the above conditions (and that there are twelve hundred Spanish Chesnut plants, at least, on each acre) must be delivered to the Society on or before the first Tuesday in November, 1784.

10, 11, 12. The like premiums will be given for fetting or fowing Spanish Chefnuts before the first of May, 1785.

CERTIFICATES to be delivered onor before the first Tuesday in November, 1785.

13. ELM. For planting the greatest number of the English Elm, not less than eight thousand, between the twenty-fourth of June, 1783, and the twenty-fourth of June, 1784, and for the effectually fencing and preserving the same, in order to raise timber; the gold medal.

- 14. For the fecond greatest number, not less than five thousand; the filver medal.
- 15. For the third greatest number, not less than four thousand; the silver medal.

CERTIFICATES of having planted agreeably to the above conditions, and specifying the distance of the trees, must be delivered to the Society, on or before the first Tuesday in November, 1784.

16, 17, 18. The fame premiums are extended one year further.

CERTIFICATES to be delivered on or before the first Tuesday in November, 1785.

19. RED VIRGINIA CEDAR. For planting out from the 24th of June, 1783, to the 24th of June, 1784, at a distance not more than four feet, the greatest number of the Red Virginia Cedar, not fewer than three thousand, the plants to be between

tween two and four years old when planted out, and for effectually fencing and preferving the same, in order to raise timber; the gold medal.

20. For the next greatest number, not fewer than two thousand; the silver medal.

CERTIFICATES of planting according to the above conditions, to be produced on or before the last Tuesday in November, 1784.

21. LARCH. For planting out, from the twenty-fourth of June, 1783, to the twenty-fourth of June, 1784, at a diftance not more than five feet, the greatest number of Larch trees, not less than five thousand; the plants to be between two and four years old when planted out, and for effectually fencing and preserving the same, in order to raise timber; the gold medal.

22. For the fecond greatest number,

not less than three thousand; the filver medal.

CERTIFICATES of planting according to the above conditions, to be delivered on or before the last Tuesday in November, 1784.

23, 24. The like premiums will be given on the fame conditions, for planting out Larch trees, between the twenty-fourth of June, 1784, and the twenty-fourth of June, 1785.

CERTIFICATES to be produced on or before the last Tuesday in November, 1785.

25. UTILITY OF LARCH. To the person who shall send in the most satisfactory account, verified by experiments, of the utility of Larch Trees, for the various purposes of timber; the gold medal.

The accounts to be produced on or before the second Tuesday in December, 1784.

26. HUN-

26. HUNTINGDON WILLOW. For the greatest number of acres, not less than three, planted in the year 1785, with Huntingdon Willows; the number of cuttings to be at least one thousand on each acre, properly fenced and secured; the gold medal.

CERTIFICATES to be produced on or before the last Tuesday in December 1785.

27. OCCIDENTAL PLANE TREES. For the greatest quantity of land, not less than two acres, planted with Occidental Plane Trees, in the year 1784, not less than five hundred on each acre, properly fenced and secured; the gold medal.

CERTIFICATES to be produced to the Society, on or before the last Tuesday in December, 1784, of the said planting, and that the trees were then growing on the land.

28. ALDER

28. ALDER. For the greatest number of acres, not less than six, planted in the year 1783, with Alders, to be at least one thousand on each acre, properly fenced and fecured.

CERTIFICATES to be produced to the Society, on or before the last Tuesday in December, 1784, of the faid planting, and that the trees were then growing on the land; the gold medal.

29. The same premium is extended one year further.

CERTIFICATES to be produced on or before the last Tuesday in December, 1785.

30. UPLAND OR RED WILLOW. For the greatest number of acres, not less than three, planted before the end of April, 1784, with Upland or Red Willow, properly fenced and fecured, the number of plants on each acre to be at least twelve hundred; the gold medal.

CER-

CERTIFICATES to be produced on or before the last Tuesday in April, 1785.

It is well known that this species of Willow thrives well on dry sandy land.

31. The same premium is extended one year further,

CERTIFICATES to be produced on or before the last Tuesday in April, 1786.

- 32. ASH. For planting the greatest number of acres, not less than six, in the year 1784, with Ash for Timber; the plants to be at least two years old, properly secured and senced; the number of plants on each acre to be at least twelve hundred; the gold medal.
- 33. For the next greatest number of acres, not less than four; the filver medal.

CERTIFICATES to be delivered on or before the second Tuesday in March, 1785.

34, 35.

34, 35. The same premiums are extended one year further.

CERTIFICATES to be delivered on or before the second Tuesday in December, 1786.

36. LOMBARDY OR PO POPLAR. For planting in the year 1783, the greatest number of the Lombardy Poplar, or Po Poplar, properly fenced and secured, for raising timber; the gold medal.

CERTIFICATES to be produced on or before the second Tuesday in November, 1784.

The quantity of land to be not less than fix acres, and not fewer than twelve hundred plants on each acre.

N. B. This tree is called by fome the Pine Poplar.

37. MIXED TIMBER TREES. To the person who shall enclose, and plant or sow the

the greatest number of acres, not less than ten, with the best sorts of Forest Trees, for timber, between the sirst of October, 1784, and the first of May, 1786; and shall deliver to the Society an account of the methods used in making the plantations, together with proper Certificates that the trees are then in a thriving condition on the land; the gold medal.

The Accounts and Certificates to be produced to the Society, on or before the first Tuesday in November, 1788.

\*\*\* The Candidates for planting all kinds of Trees, are to certify, that the respective plantations are properly fenced and secured, and particularly to state the condition the plants were in at the time of signing such Certificates.

Any information which the Candidates for the foregoing premiums may choose to communicate, relative to the methods made use of

in forming the plantations, or promoting the growth of the several trees, or any other observations that may have occurred on the subject, will be thankfully received.

38. TREES FOR USE WHEN EX-POSED TO THE WEATHER. To the person who shall send the most satisfactory account, verified by experiments, to determine which of the following trees is of the greatest utility for timber, or poles, for use when exposed to the weather, viz.

> Larch Black Poplar, Spanish Chesnut, Ash, Willow, Alder, Lombardy Poplar,

The gold medal.

The Accounts to be produced on or before the fecond Tuesday in December, 1784.

39. The same premium is extended one year further.

The

The Accounts to be produced on or before the second Tuesday in December, 1785.

40. PRESERVING ACORNS. To the person who shall produce to the Society the most effectual method of preventing Acorns, when sown or planted for Timber, being injured by Mice; the gold medal.

The Accounts verified by actual experiments, with proper Certificates that the methods made use of have been fully sufficient for the purpose, to be produced on or before the last Tuesday in November, 1784.

41. PRESERVING CHESNUTS, and SEEDS of other FOREST TREES. To the person who shall produce to the Society, the most effectual method of preventing Chesnuts, and the Seeds of other Forest Trees, when sown or planted for Timber,

Timber, being destroyed by Mice; the silver medal.

The Accounts verified by actual experiments, with proper Certificates that the methods made use of have been fully sufficient for the purpose; to be produced on or before the last Tuesday in November, 1784.

- 42, 43, 44. The premiums for preferving Acorns, Chesnuts, and other Seeds, are extended one year further; the accounts to be produced on or before the last Tuesday in November, 1785.
- 45. PLANTING BOGGY OR MO-RASSY SOILS. For an Account of the best set of experiments sent by the planter, or his representative, to ascertain the comparative advantages of planting boggy or morassy soils, with White Poplar, Black Poplar, Lombardy Poplar, and Willow; the gold medal.

It is required that not less than half an acre be planted with each, and the plants to be not more than four feet as funder.

It is also required that the plantation stand fourteen years, at the end of which, to be all cut down and measured, or accurately measured standing, the Certificates of the measure and value, and that the whole is properly fenced and secured; to be produced on or before the first Tuesday in January, 1792.

- N.B. Any information relating to the flate of the plantation, if fent to the Society, between the time of planting and claiming the premium, will be thankfully received.
- 46. The same premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in January, 1793.

47. The fame premium is extended one year further.

CERTI~

CERTIFICATES to be produced on or before the first Tuesday in January, 1794.

48. The same premium is extended to the year 1796.

CERTIFICATES to be produced on or before the first Tuesday in January, 1797.

49. ROOTS OF CORN. To the perfon who shall ascertain from observation, and by experiment, the succession of the different Roots of Corn (distinguishing the times when such succession of roots takes place) particularly those which shoot out at or near the time the plants go into ear; shewing also from sacts, the injury arising from the failure of those particular roots, and the most effectual means of preventing such missortune; the gold medal.

To be produced on or before the first Tuesday in January, 1785.

50. The fame premium is extended one year further. Accounts to be delivered on

on or before the first Tuesday in January, 1786.

N. B. These premiums are extended to Scotland and Ireland.

51. COMPARATIVE CULTURE OF WHEAT. For the best set of experiments to ascertain whether it is most advantageous to cultivate Wheat, by sowing it in the common broad-cast way, by drilling it in equi-distant rows, or by dibbling, hoeing the intervals; the gold medal.

It is defired that the distance between the rows, may not exceed eleven inches, and that an account of the nature and condition of the land on which the experiments are made, together with an account of the produce of the Corn, be produced to the Society, on or before the first Tuesday in February, 1785.

52. The same premium is extended one year further.

The

The Accounts to be produced to the Society, on or before the first Tuesday in February, 1786.

53. BEANS AND WHEAT. To the person who shall plant or drill in the year 1783, the greatest quantity of land, not less than thirty acres, with beans, and shall sow the same land with Wheat in the same year; the gold medal.

It is required that an Account of the fort and quantity of Beans, the time of planting or drilling, and of reaping or mowing them, the produce per acre threshed, the application of the straw, the expense of planting or drilling, hand or horse-hoeing, the distance of rows and the quality of the soil, together with Certificates of the number of acres, and that the land was actually sown with Wheat in the year 1783, to be produced on or before the first Tuesday in November, 1784.

- N. B. The Society have been informed that Beans may be drilled or planted so early as the month of December, from whence may be derived the advantage of an early harvest, in which case, the straw will be far more valuable than that from a later planting or drilling.
- 54. TURNEPS. For the best account of experiments made on at least six acres of land, to determine the comparative advantages of the drill, or broad-cast method in the cultivation of Turneps; the gold medal.

The Accounts to be delivered in, on or before the third Tuesday in April, 1785.

- 55. The same premium is extended one year further; the Accounts to be delivered on or before the third Tuesday in April, 1786.
- 56. GREEN VEGETABLE FOOD.

  For the best account confirmed by experiments,

ments, of the vegetable Food, (Cabbages and Turneps excepted) growing in the months of March and April, that will most encrease the milk in mares, cows, and ewes, at that season; provided such food can be cultivated at an expense that will admit of its being applied to the above purposes; the gold medal.

CERTIFICATES to be produced on or before the fecond Tuesday in November, 1784.

57. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the fecond Tuesday in November, 1785.

58. TURNEP-ROOTED CABBAGE. For raising, and having duly cultivated Turnep-rooted Cabbage, in the year 1783, for the feeding cattle or sheep, on the greatest number of acres, not less than ten,

ten, and giving an account of the foil, culture, time, and manner of feeding off, produce, and the effects on cattle or sheep, fed with it; the gold medal.

59. For the next greatest number, of acres, not less than five; the silver medal.

CERTIFICATES of the quantity of land, with the accounts, to be produced on or before the last Tuesday in October, 1785.

6c. The fame premiums are extended one year further.

CERTIFICATES to be produced on or before the last Tuesday in October, 1786.

61. TURNEP-ROOTED CABBAGE. To the person who shall have raised in the Year 1783, the greatest quantity, per acre, of Turnep-rooted Cabbage, on not less than one acre; the gold medal.

CERTI-

CERTIFICATES of the number of acres, and produce by weight, free from leaves and dirt, and before housing, with an account of the soil, preparation and culture, to be produced on or before the first Tuesday in November, 1784.

- 62. The same premium is extended one year further; the quantity of land to be at least four acres.
- 63. CULTIVATING ROOTS AND HERBAGE FOR FEEDLNG SHEEP AND BLACK CATTLE. For the most satisfactory experiments made between Michaelmas, 1785, and the first of May, 1786, in order to ascertain which of the following plants can be cultivated and housed, or otherwise secured for winter fodder, to the greatest advantage, viz.

Turnep-rooted Cabbage, Carrots,
Turnep Cabbage, Parsneps,
Turneps, Potatoes,
The

The Accounts to be produced on or before the first of November, 1786; the gold medal.

It is required that the above roots be taken off the land by the last day of October, 1785; that a Crop of Wheat may be sown in the same ground, and the particulars of the sowing and planting, taking up, produce, preservation, and application to the feeding Sheep and Black Cattle, be specified. The comparative experiment must be made between two or more of any of the abovementioned plants, and not less than two acres be cultivated with each particular kind of plant.

N. B. Great advantage will arise to the Farmer occupying land, in the neighbour-hood of extensive commons, from the conveniency of keeping large flocks of sheep, and herds of cattle, if the difficulty of supporting them through the Winter was obviated by a due knowledge of this practice.

CERTI-

64. MANAGING BEES. To the perfon who shall produce to the Society the most satisfactory account verified by experiments, of managing Bees to the greatest advantage in this climate; the gold medal.

To be produced on or before the second Tuesday in January, 1785.

- 65. CULTIVATING THE TRUE RHUBARB. For raising before the end of the year 1784, the greatest number of plants, not less than three hundred, of Rheum Palmatum, or true Rhubarb; the gold medal.
- 66. For the next greatest quantity, not less than two hundred plants; the silver medal.

CERTI-

CERTIFICATES of the number of plants, that they stand at least fix feet asunder, that they have been in a thriving state during the preceding summer, with an account of the soil, culture, and aspect, to be produced on or before the second Tuesday in February, 1785.

67, 68. The fame premiums are extended one year further.

CERTIFICATES to be produced on or before the fecond Tuesday in February, 1786.

69, 70. The same premiums are extended one year further, the plants to stand at least four feet asunder.

CERTIFICATES to be produced on or before the fecond Tuesday in February, 1787.

71. RHUBARB. For the greatest quantity of Rhubarb of British growth, not less than twenty pounds weight, equal to such

as is comomnly fold in the shops, under the name of Turkey or Russia Rhubarb; five pounds of which to be produced as a sample, with certificates that the remainder is of equal goodness; and a particular account of the manner of culture, and cure, on or before the first Tuesday in November, 1784; the gold medal.

- 72. For the next greatest quantity, not less than ten pounds weight; the silver medal.
- 73, 74. The same premiums are extended one year further. The samples and certificates to be produced on or before the first Tuesday in November, 1785.
- 75. ASCERTAINING THE COM-PONENT PARTS OF ARABLE LAND. To the person who shall produce to the Society the most satisfactory set of experiments, to ascertain the due proportion of the several component parts of Ara-

ble Land, in one or more counties in Great Britain, by an accurate analysis of it, and who having made a like analysis of some poor land, shall, by comparing the component parts of each, and thereby afcertaining the deficiencies in the poor soil, improve a quantity of it, not less than two acres, by the addition of such parts as the sormer experiments shall have discovered to be wanting therein, and therefore probably the cause of its sterility; the gold medal.

It is required that the manurings, ploughings, and crops of the improved land, be the same after the improvement as before, and that a minute account of the produce in each state; of the weather, and of the various influencing circumstances, together with the method made use of in analysing the soils, to be produced, with proper certificates, and the chemical results of the analyses, which are to remain the property

property of the Society, on or before the last Tuesday in November, 1788.

It is expected that a quantity not less than fix pounds of the rich, of the poor, and of the improved soils, be produced with the certificates.

N. B. Among the methods or processes made use of by Chemists, and called dry or moist, the latter only appears adapted to the ascertaining the respective proportions of the component parts of arable earth.—Dr. Shaw, in his Chemical Lectures.—Dr. Home, in his principles of Agriculture.—Dr. George Fordyce, in his Elements of Agriculture, and Sir Torbern Bergman, in his Dissertation sur les Terres geopaniques have treated of these subjects.

76. The same premium is extended one year further; the accounts to be produced on or before the last Tuesday in November, 1789.

- 77. The same premium is extended one year further; the accounts to be produced on or before the last Tuesday in November, 1790.
- 78. IMPROVING LAND LYING WASTE. For the best account of a method for improving any of the following soils, being land lying waste or uncultivated, viz. Clay, Gravel, Sand, Chalk, Moor, or Peat-earth, and Bog; verified by experiments on not less than ten acres of land, to be produced on or before the second Tuesday in December, 1784, the gold medal for each.
- 79. For the next in merit, the filver medal.

The foil, manner of improvement, expense and product, are required to be fully explained.

80, 81. The fame premiums are extended one year further.

The

The Accounts to be produced on or before the fecond Tuesday in December, 1785.

82, 83. The same premiums are extended one year further.

The Accounts to be produced on or before the fecond Tuesday in December, 1786.

84. MANURES. To the person who shall give the most satisfactory account, verified by accurate experiments, on what soil the application of Marle, Chalk, Lime, or Clay, severally, as manures, be most beneficial; the gold medal.

It is required that each experiment be made on one acre, and that they be continued four years, the same kind of Grain being sown the same year on the several spots.

It is also required, that if different manures are compared, the experiments be

U 4 made

made on fimilar foils, lying near each other.

An account of the nature of the foil, manure, and the quantity laid on, with all expenses and crops, to be delivered, with specimens of the soil and manure, on or before the first Tuesday in January, 1785.

85. The same premium is extended one year further.

The Accounts and Specimens to be produced on or before the first Tuesday in January, 1786.

86. The same premium is extended one year further.

The Accounts and Specimens to be produced on or before the first Tuesday in January, 1787.

87. MANURES. For the most satisfactory set of experiments, to ascertain the comparative

comparative advantage of the following Manures, used as Top-Dreffings, on Grass or Corn Land, viz. Soot, Coal-ashes, Wood-ashes, Lime, Night-soil; the gold medal.

It is required that not less than half an acre of land be appropriated to each Manure, the foils fimilar, and lying near each other, and if the Manure be used on Corn Land, then it is required that the same kind of Grain be fown the same year on each fpot; the experiments to be continued not less than two years.

An Account of the nature of the Soil, quantity, and expense of the Manure and Crops, with Certificates, to be produced on or before the first Tuesday in December, 1787.

ASCERTAINING THE BEST COURSE OF CROPS ON CLAY SOIL. To the person who shall give the most fatiffatisfactory account, verified by comparative experiments, in order to afcertain the course of Crops, which with or without a fallow, shall, during the space of eight years, prove most profitable, and shall leave the land in the best state, on a Clay Soil; the gold medal, or sifty pounds.

It is required that such comparative experiments be made on three acres at least in each mode; the soil to be as contiguous and similar as possible. An account of the soil, management, and crops, to be delivered on or before the first Tuesday in January, 1786.

89. COURSE OF CROPS ON STRONG LAND. For the most satisfactory account, verified by experiments, made on not less than five acres of Clay, or wet Loam, to ascertain the advantages of the following course of crops, viz. First, Beans drilled, or planted and hoed; Secondly, Wheat; the gold medal.

Thefe

These experiments to be continued two courses, or four years.

CERTIFICATES, with an account of the foil, culture, and quantity of manure (ifany) laid on, to be produced on or before the last Tuesday in March, 1788.

N. B. The success of this course of crops, much depending on the land being kept entirely clean, it is expected that each crop of the Beans be horse-hoed or hand-hoed, at least three times.

IMPROVING WASTE MOORS. For the improvement of the greatest number of acres of Waste Moor Land, not less than one hundred; the gold medal.

It is required that the land before improvement, be absolutely uncultivated, in a great measure uteless, not let to any tenant, and without any building upon it, except cottages or huts. That in its improved state, it shall be enclosed, cultivated, and

#### 308 AGRICULTURE.

and divided into fields, with buildings erected thereon, sufficient for the use and residence of a tenant.

CERTIFICATES of the number of acres, of the quality of the Moor so improved; of the mode and expense of the improvement; the state it is in as to the proportion of grass to arable; the rent at which it is let; to be produced on or before the first Tuesday in February, 1785.

91. The same premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in February, 1786.

92. The same premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in February, 1787.

93. GAINING LAND FROM THE SEA. To the person who shall produce to the Society an account of the best method.

thod, verified by actual experiment, of gaining Land from the Sea, not less than twenty acres, on the coast of England or Wales; the gold medal.

CERTIFICATES of the quantity of Land, and that the experiments were begun after the first of January, 1780, to be produced to the Society on or before the first Tuesday in October, 1785.

N. B. The Society having been credibly informed, that Land has been gained on the coast of Holland, by fixing rows of whisps of straw upright in the sand, at about a foot distance from each other, or by fixing Stakes at proper distances from each other, and whatling Straw Bands between them.

94. The same premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in October, 1786.

95. The

## 310 AGRICULTURE.

95. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in October, 1787.

96. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in October, 1788.

97. DRILL PLOUGH FOR HORSE BEANS. For the best Drill Plough for Horse Beans only; being an improvement on those already in the possession of the Society, or generally known; to be produced to the Society, on or before the first Tuesday in January, 1785; the silver medal, or tenguineas.

It is expected the plough be strong and cheap, no variation of depth or distance being required.

The

The plough to which the premium is adjudged, is to become the property of the Society.

98. MACHINE TO ANSWER THE PURPOSE OF REAPING OR MOW-ING CORN. For inventing a machine to answer the purpose of mowing or reaping Wheat, Rye, Barley, Oats, or Beans, by which it may be done more expeditiously and cheaper, than by any method now practised, provided it does not shed the Corn or Pulse, more than the methods in common practice, and that it lays the straw in such manner as may be easily gathered up for binding; the gold medal.

The Machine, with certificates that at least three acres have been cut by it, to be produced to the Society on or before the second Tuesday in December, 1784.

Simplicity and cheapness in the construction, will be considered as principal parts of its merit.

99. CUR-

## 312 AGRICULTURE.

99. CURING SCAB IN SHEEP. To the person who shall discover to the Society the most efficacious method of curing the disorder called the *Scab in Sheep*, verified by repeated trials; the silver medal, or ten guineas.

CERTIFICATES of the cure, with an account and description of the disease, to be delivered to the Society, on or before the second Tuesday in January, 1785.

Premiums for Discoveries and Improvements in Chemistry, Dveing, and Mineralogy.

not less than four tons of Kelp, containing a much larger proportion of Alkaline Salt than any Kelp now made for sale; twenty pounds.

A specimen of one hundred weight, to be produced on or before the first Tuesday in January, 1785; together with Certificates that the whole quantity is equal to the specimen, and made in Great-Britain or Ireland, of Sea Weed.

tot. BARILLA. For the greatest quantity of merchantable Barilla, not less than half a ton, made from Spanish Kali, raised in Great-Britain; the gold medal.

A fample of not less than twenty-eight pounds, with a Certificate that half a ton

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has been made, to be produced on or before the first Tuesday in January, 1785.

NATIVE FOSSIL FIXT AL-KALI, FROM THE EAST-INDIES. To the perfon who shall import into the port of London, in the year 1784, the greatest quantity, not less than half a ton, of the Native Fossil Fixt Alkali, sit for the purposes of the soap-makers, being the produce of any part of the British possessions in the East-Indies; the gold medal, or thirty pounds.

A fample not less than fifty pounds weight, with proper Certificates, to be produced on or before the last Tuesday in January, 1785.

GETABLES. For the best method of preserving the seeds of plants in a state sit for vegetation, after having been kept a considerable time, such method being superior to any known to the publick, and verified

verified by sufficient trial; to be communicated to the Society on or before the first Tuesday in December, 1784; the gold medal.

the best account, ascertained by proper experiments, of a method of destroying or burning the smoke of sires belonging to steam Engines, Furnaces employed in calcining or smelting metals, or other large works, in order to prevent annoyance to the neighbourhood; to be produced on or before the first Tuesday in January, 1785; the gold medal.

TION OF YEAST. For discovering to the Society an effectual Substitute for Yeast, or Preparation of Yeast, for fermenting liquors, and raising bread, that may be preserved for use, better than any hitherto generally known; the gold medal, or twenty pounds.

Speci-

#### 316 CHEMISTRY.

Specimens of the Substitute, or of the Preparation of Yeast, sufficient for trials, together with a paper sealed up, and containing an account of the composition of the Substitute, or method of preparing the Yeast, to be produced on or before the last Tuesday in November, 1784.

any person who shall discover to the Society, a method, verified by actual experiments, of increasing the quantity, or the force, of Steam, in Steam Engines, with less such than is usually employed, provided that in general the whole amount of the expenses in using Steam Engines may be considerably lessened; the gold medal.

To be communicated to the Society on or before the first Tuesday in January, 1785.

N. B. As it is well known there are methods of preventing the ebullition of liquids, by the addition of particular matters in the boiling,

boiling, it is submitted to the consideration of the ingenious, whether by the addition of some matters, or by some mechanical operations, the boiling and evaporation may not be increased.

107. The same premium is extended one year further. To be communicated to the Society on or before the first Tuesday in January, 1786.

108. METHOD OF COMPARING SWEETS. To the person who shall discover to the Society an Index, or practicable method of comparing, measuring, and ascertaining the degrees of Sweetness in Saccharine Substances; the gold medal.

To be produced on or before the first Tuesday in January, 1785.

109. PREVENTING THE DRY ROT
IN TIMBER. To the person who shall discover to the Society, the cause of the Dry
Rot in Timber, and disclose a certain me
x 3 thod

### 318 CHEMISTRY.

thod of prevention, superior to any hitherto known; the gold medal.

The accounts of the cause and method of prevention, confirmed by repeated experiments, to be produced to the Society on or before the second Tuesday in December, 1785.

DALS. To the person who shall discover to the Society a method of bronzing Copper Medals, equal to that practised in France; the gold medal.

To be produced to the Society on or before the fecond Tuesday in December, 1784.

- DRAWINGS. For the best drawing of any kind, made with crayons, chalk, black lead, pen, Indian ink, or bister, by young gentlemen under the age of twenty-one, sons, or grandsons of Peers, or Peeresses, in their own right, of Great-Britain or Ireland; to be produced on or before the first Tuesday in March, 1785; the honorary medal of the Society in gold.
- 112. The same in filver for the second in merit.
- 113, 114. The same premiums will be given on the like conditions, to young ladies, daughters, or grand-daughters, of Peers, or Peeresses, in their own right, of Great-Britain or Ireland.
- DRAWINGS. For the best drawings of any kind, made with crayons, chalk, x 4 black

black lead, pen, Indian ink, or bister; by young gentlemen under the age of twenty one.

To be produced on or before the first Tuesday in March, 1785; the gold medal.

- 116. For the next in merit; the filver medal.
- 117, 118. The fame premiums will be given for drawings by young ladies.
- N. B. Persons professing any branch of the Polite Arts, or any business dependant on the arts of design, or the sons or daughters of such persons, will not be admitted candidates in these classes.
- The following Premium is offered in Conformity to the Will of the late John Stock, of Hampstead, Esq.
- TURE. For the best drawing of the front of the buildings in the Adelphi, occupied by

by the Society; done from an actual meafurement, accurately outlined and properly shaded; the drawing to be as large as a half sheet of double elephant paper will admit with a proper scale annexed: A silver medallion with the following engraved Inscription. The Premium given by the Society, for the Encouragement of Arts, Manufactures, and Commerce, in Conformity to the Will of John Stock, of Hampstead, Esq.

To be produced on or before the third Tuesday in October, 1784.

N. B. The drawing to which the Premium is adjudged, is to remain the property of the Society.

120. DRAWINGS OF OUTLINES. For the best Outline after an original group or cast in plaster of human figures, by persons of either sex under the age of sixteen, the principal figure not less than twelve inches; to be produced on or before

fore the last Tuesday in October, 1784; the greater filver pallet.

- 121. For the next in merit; the leffer filver pallet.
- N. B. These drawings are to be made on paper with chalk, black lead, Indian ink, or bister, and the originals either to be produced to the Society, or to be referred to for their examination.
- TURES. For the best drawing after a Picture of a Group of human figures, the principal figure not less than sixteen inches, by persons of either sex under the age of sixteen; to be produced on or before the last Tuesday in October, 1784; the greater silver pallet.
- 123. For the next in merit; the leffer filver pallet.

The

The drawings to be made with Indian ink, chalk, or black lead, and of a different fize from the original, which must be produced at the same time.

124. DRAWINGS OF MACHINES. For the best perspective drawing, by persons of either sex, under the age of twenty-one years, of the model of Mr. Lloyd's Cyder Mill, or any other machine, of which such a drawing has not been made in the Society's Repository; the greater silver pallet; to be produced on or before the third Tuesday in October, 1784.

N. B. Such candidates as propose to draw for this premium will be admitted by the register any day (Sundays or Wednesdays excepted) between the hours of ten and two.

The drawing to which the premium is adjudged, is to remain the property of the Society.

125. DRAW-

the best drawing and composition of three or more beasts after nature, the principal sigure to be not less than eighteen inches, by persons of either sex, under the age of eighteen years. To be made with chalk, black lead, pen, Indian ink, bister, crayons, or water colours; to be produced on or before the third Tuesday in October, 1784; the greater silver pallet.

126. For the next in merit; the leffer filver pallet.

127. DRAWINGS OF BIRDS. For the best drawing and composition after nature of not less than three different birds, to be made with crayons or water colours, by persons of either sex, under the age of eighteen years; to be produced on or bestore the third Tuesday in October, 1784; the greater filver pallet.

128. For

128. For the next in merit; the leffer filver pallet.

129. DRAWINGS OF FRUIT, FLOW-FRS, OR PLANTS. For the best drawing after nature, of fruit, slowers, or plants, to be made with crayons, or water colours, by persons of either sex, under the age of sixteen; to be produced on or before the third Tuesday in October, 1784; the greater silver pallet.

130. For the next in merit; the leffer filver pallet.

131. DRAWINGS OF LANDSCAPES. For the best drawing of Landscapes after nature, by persons of either sex under twenty-one years of age, to be produced on or before the third Tuesday in October, 1784; the greater silver pallet.

132. For the next in merit; the leffer filver pallet.

Each

Each candidate must mention, on the front of his drawing, from whence he took his view; and the drawings must be made with chalk, pen, Indian ink, or bifter.

133. HISTORICAL DRAWINGS. For the best Historical Drawing, being an original composition of sive or more human sigures; the height of the principle sigure not less than eight inches, to be made with crayons, chalk, black lead, pen, Indian ink, or bister, and to be produced on or before the first Tuesday in February, 1785; the gold pallet.

134. For the next in merit; the greater filver pallet.

## To the Masters of Academies or Schools.

135. TEACHING LANGUAGES. Whereas it has been observed that the living languages, or languages spoken in schools, are much sooner acquired than the dead languages, which are only taught grammatically.

The Society, desirous to improve the present mode of education, hereby offer the gold medal to the master of any academy, or school for boys, situated within, or not more than thirty miles distant from London, who shall within three years, from the date of this advertisement, teach the greatest number of scholars, not less than four, to write, and to speak Latin, in common conversation, correctly and sluently.

Also the gold medal for teaching in the like manner, each of the following languages,

guages, viz. the German, the Spanish, and the Italian, being commercial languages, not usually taught at schools in England.

The masters who propose to be candidates for the above premiums, are to send notice of their intention to claim them, to the Society, at their house in the Adelphi, on or before the second Tuesday in November, 1786. Soon after which, the Society will appoint a day for examining the young gentlemen, and for adjudging the said claims.

And in order to encourage affiduity in the scholars, whose masters apply for the above premiums, the Society will give to the greatest proficient in each of the said languages, the silver medal.

N. B. Any information for the further improvement of the education of youth, in languages, will be thankfully received.

CONDI-

#### CONDITIONS

No person who has gained the first premium in any class, will be admitted a candidate in a class of an inferior age; and no candidate shall receive more than one premium in one year; nor will they, who, for two successive years, shall gain the first premium in one class, be ever again admitted as candidates in that class.

No person shall ever be admitted a candidate in any class, in which he has three times obtained the whole of the first premium.

No candidate shall fend in more than one performance in any one class.

All the claims which are produced each year, before the Committee of Polite Arts (to which premiums or bounties are adjudged) are to remain with the Society fix weeks after the determination, unless the

candidates, for particular reasons, do apply to have the performance returned.

No claim for a premium in the Polite Arts will be admitted, that has obtained, or has been produced in order to obtain a premium, reward, or gratification from any other Society, or any academy or school.

All performances, that obtain premiums in the Polite Arts, must be begun after the publication of fuch premiums.

Purposely to encourage real merit, and to prevent any attempts to impose on the Society, by producing drawings which shall have been made or retouched by any other person than the candidate, the Society is refolved upon all occasions, with respect to the successful candidates in classes 119, to 133 inclusive, to prove their abilities, by requiring a specimen made under the inspection of the Committee of Polite Arts, in every instance where such proof can be obtained.

Premiums

Premiums for encouraging and improving

Manufactures.

136. SILK. For the greatest quantity of merchantable Silk, not less than five pounds, produced by any one person in England, in the year 1784; the gold medal.

Specimens of the Silk, not less than one pound, with Certificates that the whole is of equal quality, and produced in England; to be delivered to the Society on or before the first Tuesday in January, 1785.

- 137. For the second greatest quantity, not less than two pounds; the silver medal.
- 138. MULBERRY CUTTINGS. For raifing the greatest number of white or black Mulberry Trees, for feeding Silk worms, not less than three hundred, from Y 2 cuttings,

## 332 MANUFACTURES.

cuttings, in the year 1783, which shall be growing in September, 1784.

CERTIFICATES of fuch raising and growth, with the manner of culture, to be produced to the Society on or before the first Tuesday in November, 1784; the gold medal.

139. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in November, 1785.

140. MULBERRY CUTTINGS. To the person who shall form the largest plantation, not less than one acre, of Mulberry Cuttings, for the purpose of seeding Silk Worms; the gold medal.

CERTIFICATES of the quantity of land, and that the Mulberry Plants are not more than three feet afunder; to be produced on or before the first Tuesday in December, 1784.

#### MANUFACTURES. 333

It is proposed, that this plantation be continually kept in a low state, to the intent that the gathering the leaves may always be within the reach of women or children.

141. The same premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in December, 1785.

- 142. MACHINE FOR CARDING SILK. For the best machine, superior to any now in use, for carding waste Silk, equally well as by hand; to be produced, together with a specimen of the Cardings, on or before the first Tuesday in November, 1784; the gold medal, or twenty pounds.
- 143. WEAVING FISHING NETS. For the best specimen of plain netting, for Fishing Nets, not less than twenty yards long, and six feet deep, woven in a loom,

#### 334 MANUFACTURES.

or other machine; to be produced to the Society on or before the second Tuesday in January, 1785; twenty guineas.

N. B. It is expected that the specimen produced, be made in such a manner, as to be cut and joined without more loss than usual, that it have such a plain selvege as the common sishing nets, and that the knot be equally fast with those in nets in common use, and as easily repaired.

# 144. PAPER FOR COPPER PLATES. To the person who shall establish in England or Wales a manufacture of paper, equal to the paper imported from France, proper for receiving impressions from mezzotinto, and other engraved copper-plates, and produce to the Society, one ream, of the dimensions of the French super-royal, on or before the first Tuesday in January, 1785; the gold medal.

CERTIFICATES must be produced to the satisfaction of the Society, that the paper was made in England or Wales.

#### Premiums for Inventions in Mechanicks.

- 145. TRANSIT INSTRUMENT. To the person who shall invent and produce to the Society, a cheap and portable Transit instrument, which may easily be converted into a Zenith Sector, capable of being accurately and expeditiously adjusted for the purposes of finding the latitudes and longitudes of places, and superior to any portable Transit Instrument now in use; the gold medal; to be produced on or before the last Tuesday in January, 1785.
- 146. GUN HARPOON. For every Whale taken by means of the Gun Harpoon; to the person who first strikes such fish therewith; two guineas.
- N.B. Proper Certificates of the taking fuch Whales, in the year 1784, figned by the master or by the mate, when the claim

is made by the master; to be delivered to the Society on or before the last Tuesday in December, 1784.

147. GUN FOR THROWING HARPOONS. To the person who shall produce to the Society, the best improvement in the construction of a Gun for throwing Harpoons, so as to render it more manageable than those at present in use; the silver medal, or ten guineas.

To be delivered to the Society on or before the first Tuesday in December, 1784.

148. HARPOON TO BE THROWN BY A GUN. To the person who shall produce to the Society, the best improvement in the construction of a Harpoon to be thrown by a gun; the Harpoon to be so contrived, that it may strike and hold the sish with more certainty and greater effect than any hitherto made use of; the silver medal, or ten guineas.

To be delivered to the Society on or before the first Tuesday in December, 1784.

149. MACHINE FOR TRANSPORT-ING TIMBER. To the person who shall produce to the Society a model of the best, most simple, and cheap Machine or Carriage for transporting Timber, or other heavy Materials, on soft or clayey roads, at the least expense; to be sent in on or before the last Tuesday in November, 1784; twenty guineas.

150. IMPROVEMENT OF THE HAND VENTILATOR. To the person who shall produce to the Society, on or before the last Tuesday in February, 1784, a portable Ventilator, to be worked by hand, better adapted and more efficacious for extracting soul air from gaols, prisons, and ships, than any now known or in use; the gold medal.

#### 338 MECHANICKS.

151. ENGINE FOR WORKING LOOMS. To the person who shall invent and construct an Engine, for the purpose of working at one time the greatest number of looms, not sewer than three, for weaving silk, woollen, linen, or cotton goods (equally well, and more expeditiously than by hand, or by any other method now in use) each piece not to be less than half a yard wide; the gold medal, or thirty guineas.

CERTIFICATES of the working such Engine, with samples, not less than one yard long, to be produced on or before the first Tuesday in January, 1785.

152. CRANES FOR WHARFS. To the person who shall invent and produce to the Society, a model of a Crane for Wharfs, on a scale of not less than one inch to a foot, the construction to be such that the power may be varied in a simple manner, according to the weight to be raised, and by which which a greater weight shall be lifted by a given power through a like space, in equal time, than by any at present in use; the gold medal, or twenty guineas.

To be produced on or before the first Tuesday in February, 1785.

- N. B. The model should neither be of the walking wheel, nor capstan kind.
- 153. CARRIAGE TO CONVEY ENGINES FOR EXTINGUISHING FIRES. To the person who shall invent and produce to the Society, a Machine or Carriage for conveying Engines for extinguishing fires with greater ease and safety than any now in use, and from which they may be delivered in the most persect state for working; the gold medal.

To be produced on or before the last Tuesday in January, 1785.

154. MACHINE FOR CLEARING RIVERS. For the best model of a machine,

# 340 MECHANICKS.

chine, fuperior to any now in use, sor Clearing Navigable Rivers from Weeds, at the least expense; ten guineas.

To be produced to the Society on or before the first Tuesday in February, 1785.

Premiums

Premiums offered for the Advantage of the British Colonies.

155. NUTMEGS. For the greatest quantity of merchantable nutmegs, not less than five pounds weight, being the growth of his majesty's dominions in the West-Indies, and nearly equal to those imported from the islands of the East-Indies; the gold medal, or one hundred pounds.

Satisfactory Certificates from the governor, or lieutenant-governor, or some perfons of known credit, of the place of growth, with an account of the number of trees, their age, nearly the quantity of fruit on each tree, and the manner of culture, to be produced on or before the first Tuesday in January, 1785.

156. The same premium is extended one year further.

CERTIFICATES to be produced on or before the first Tuesday in January, 1786.

N. B.

#### 342 COLONIES AND TRADE.

N. B. Any person desirous of information on the subject of Nutmeg Trees, may obtain it from a memorial on the fructification of the Nutmeg, and the surest method of cultivating it to advantage by the King's Gardener, at the Isle of Bourbon, inserted in Mr. Maty's Review, for August, 1783.

157, 158. BREAD FRUIT TREE. To the person or persons, who between the first of June, and the sisteenth of August, 1785, shall bring into the port of London the greatest number of plants of one or both species of the Bread Fruit Tree, in a growing state, not less than three of either species; the gold medal.

159, 160. The same premiums are extended one year further; the plants to be brought into the port of London, between the first of June, and the sisteenth of August, 1786.

N. B. The plants which obtain the premium are to be the property of the Society, to be disposed of according to their discretion.

THE SOCIETY being informed that a confiderable quantity of oil can be obtained from the Seed of Cotton, and that after the expression of the oil, the remaining cake will afford a strong and hearty food for cattle; and likewise, that the apparatus for the operation can be applied to the mill for fugar canes, and worked in the rainy scason, at a moderate expense, have resolved, for the foregoing reasons, that the procuring oil from the Seed of Cotton is a proper object of a premium, confidered as an encouragement for planters to extend the cultivation of Cotton, an article essentially requisite to increase the manufacture of that commodity in this country.

The Society therefore offer as follows.

#### 344 COLONIES AND TRADE.

161. OIL FROM COTTON SEED. To the planter in any of the British Islands of the West-Indies, who shall express oil from the seed of Cotton, and make from the remaining seed hard and dry cakes, as food for cattle; the gold medal.

CERTIFICATES that not less than one ton of the oil has been expressed, and five hundred weight of the cakes obtained, to be produced to the Society, with two gallons of the oil, and two dozen of the cakes, together with a full account of the process, on or before the last Tuesday in November, 1785.

- 162. For the next greatest quantity, not less than half a ton of oil, and two hundred weight of the cakes; the silver medal.
- 163, 164. The fame premiums are extended one year further.

CERTIFI-

CERTIFICATES and Samples, to be produced on or before the last Tuesday in November, 1786.

165. SPIRIT FROM THE PULP OF THE COFFEE BERRY. To the Planter in any of the British Islands in the West Indies, who shall distill the greatest quantity of Spirit, from the Pulp of the Cossee Berry, not less than thirty Gallons, and produce to the Society one Gallon of the Spirit, together with an account of the process used in the making it; the gold medal.

166. For the next greatest quantity, not less than fifteen Gallons; the filver medal.

CERTIFICATES figned by the Governor, Lieutenant-Governor, or some persons of known credit in the Island, to be delivered to the Society on or before the first Tuesday in January, 1786.

167. SENNA.

### 346 COLONIES AND TRADE.

167. SENNA. To the person who shall import into the port of London, in the year 1786, the greatest quantity of Senna, not less than two hundred weight, the growth of any of the British Islands in the West Indies, and equal to the Alexandrian Senna, now used for medicinal purposes; the gold medal.

CERTIFICATES of the growth and method of culture, to be produced to the Society, on or before the first Tuesday in February, 1787.

Notwithstanding the Society reserve to themselves the power of giving, in all cases, such part only of any premium as the performance shall be adjudged to deserve, or of with-holding the whole, if there be no merit; yet the Candidates may be assured, the Society will always judge liberally of their several claims.

It is required, that the matters for which premiums are offered, be delivered in without names, or any intimation to whom they belong; that each particular thing be marked in what manner each claimant thinks fit, such claimant fending with it a paper sealed up, having on the outside a corresponding mark, and on the inside the claimant's name and address.

No papers shall be opened, but such as shall gain premiums, unless where it appears to the Society absolutely necessary for

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the determination of the claim: all the rest shall be returned unopened, with the matters to which they belong, if inquired after by their marks within two years; after which time, if not demanded, they shall be publickly burnt, unopened, at some meeting of the Society.

All models of machines, which obtain premiums or bounties, for the future, shall be the property of the Society.

All the premiums of this Society are defigned for that part of Great Britain, called England, the dominion of Wales, and the town of Berwick upon Tweed, unless expressly mentioned to the contrary.

The claims shall be determined as soon as possible after the delivery of the specimens.

No person shall receive any premium, bounty or encouragement, from the Society, for any matter for which he has obtained.

obtained, or proposes to obtain, a patent.

A candidate for a premium, or a person applying for a bounty, being detected in any disingenuous method to impose on the Society, shall forseit such premium or bounty, and be deemed incapable of obtaining any for the suture.

The performances which each year obtain premiums or bounties, are to remain with the Society until the end of May, except as mentioned in the conditions annexed to the premiums offered for promoting the Polite Arts.

No member of this Society shall be a candidate for, or intitled to receive any premium, or bounty, or reward whatsoever, except the honorary medal of this Society.

Where Certificates are required to be produced in claim of premiums, they should be expressed as nearly as possible in the words of the respective advertisements,

and should not be from the candidate, (solely) but from some other person, or persons, who have a positive knowledge of the facts certified.

Where premiums, or bounties, are obtained, in consequence of specimens produced, the Society mean to retain such part as they may judge necessary, making a reasonable allowance for the same.

No Candidates shall be present at any meetings of the Society or Committees, or admitted at the Society's rooms, after they have delivered in their claims, till such claims are adjudged, unless summoned by the Committee.

N. B. Any information or advice that may forward the defigus of this Society for the public good, will be received thankfully, and duly confidered, if communicated by letter, addressed to the Society, and directed to Mr. More, the Secretary,

at the Society's office, in the Adelphi Buildings, London.

\*\*\* In case any person should be inclinable to leave a sum of money to this Society by will; the following form is offered for that purpose:

Item, I give and bequeath unto A. B. and G. D. the sum of upon condition and to the intent, that they, or one of them, do pay the same to the Collector for the time being, of a Society in London, who now call themselves the Society for the Encouragement of Arts, Manufactures, and Commerce; which said sum of I will, and desire may be paid out of my personal estate, and applied towards carrying on the laudable designs of the said Society.

By order of the Society,

SAMUEL MORE, Secretary.